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EXAMINER

BLAIR, DOUGLAS B

ART UNIT PAPER NUMBER

2142

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/425,088

Applicant(s)

SINHA, HIMANSHU S.

Examiner

Douglas B Blair

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 1-5 and 7-17 are currently pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,243,396 to Somers in view of U.S. Patent Number 6,272,110 to Tunncliffe et al..
4. As to claim 1, Somers teaches a system having a client computer system and a service provider computer system programmed with a service implementation, an apparatus comprising: a service level agreement manager disposed between the client computer system and the service implementation (In col. 10, lines 66-67 and col. 11, lines 1-48, the customer communicates with the authority. In col. 2, lines 62-27 and col. 3, lines 1-3, the authority controls the resources. The customer is a client, the authority is a service level agreement manager, and the resource is a service implementation.), the service level agreement manager comprising: an admission controller configured to control admission of the client computer system to the service implementation using a service level agreement (col. 10, lines 66-67 and col. 11, lines 1-48, The service agent implements a service level agreement to control admission.); a performance

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measurement module in communication with the admission controller and configured to measure performance of the service implementation (col. 10, lines 66-67 and col. 11, lines 1-48, The performance agent is a performance module.); and a specification module in communication with the admission controller and with the performance measurement module (col. 10, lines 66-67 and col. 11, lines 1-48, The configuration agent is in communication with the service agent and also the performance agent via the service agent.); however Somers does not explicitly teach modifying an estimated capacity based of the service provider based on the measured performance.

Tunncliffe teaches a system for measuring performance of a service implementation and modifying an estimated capacity of a service provider based on the measured performance (col. 6, lines 53-67 and col. 7, lines 1-3).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Somers regarding a service level agreement implementation with the teachings of Tunncliffe regarding modifying an estimated capacity based on the measured performance because changing an estimated capacity provides more flexibility for clients (Tunncliffe col. 1, lines 11-35).

5. As to claim 2, Somers teaches the apparatus of claim 1; however, Somers does not teach an apparatus wherein the specification module is configured to compare service implementation performance data and client usage information.

Somers does teach an apparatus wherein the service agent compares the service implementation performance data and client usage information (col. 10, lines 66-67 and col. 11, lines 1-48).

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It would have been obvious to one of ordinary skill in Computer Networking art at the time of the invention to combine the teachings of Somers regarding an SLA system with the teachings of Somers regarding comparing data because service agent forwards the results of the comparison to the configuration agent (col. 10, lines 66-67 and col. 11, lines 1-48), which performs similar functions to the specification module.

6. As to claim 3, Somers teaches a method for service level formation, comprising: providing a service level agreement manager (col. 10, lines 66-67 and col. 11, lines 1-48, The authority.), the service level agreement manager having an admission controller, a specification module and a performance measurement module (col. 10, lines 66-67 and col. 11, lines 1-48); establishing communication between a client computer system and the service level agreement manager (col. 10, lines 66-67 and col. 11, lines 1-48, The customer interfaces the authority.); invoking the specification module of the service level agreement manager (col. 10, lines 66-67 and col. 11, lines 1-48, The configuration agent is contacted by the service agent.); obtaining performance information from the performance measurement module (col. 10, lines 66-67 and col. 11, lines 1-48, the performance sends out reports to the service agent.); obtaining usage information associated from the client (col. 10, lines 66-67 and col. 11, lines 1-48, The service agent obtains usage information from the customer.); and comparing the performance information and the usage information to determine if there exists a basis for forming a service level agreement (col. 10, lines 66-67 and col. 11, lines 1-48, The service agent forms an SLA.); however Somers does not explicitly teach modifying an estimated capacity based of the service provider based on the measured performance.

Tunncliffe teaches a system for measuring performance of a service implementation and modifying an estimated capacity of a service provider based on the measured performance (col. 6, lines 53-67 and col. 7, lines 1-3).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Somers regarding a service level agreement implementation with the teachings of Tunncliffe regarding modifying an estimated capacity based on the measured performance because changing an estimated capacity provides more flexibility for clients (Tunncliffe, col. 1, lines 11-35).

7. As to claim 4, the teachings of the Somers-Tunncliffe combination make claim 3 obvious. Somers teaches a method comprising forming the service level agreement; and providing the admission controller with the specification information from the service level agreement formed (col. 10, lines 66-67 and col. 11, lines 1-48).

8. As to claim 5, Somers teaches a method for managing system performance, comprising: providing a service level agreement manager; providing a client organization (col. 10, lines 66-67 and col. 11, lines 1-48, The customer.); providing a service organization (col. 10, lines 66-67 and col. 11, lines 1-48, The authority.); forming a service level agreement between the client organization and the service organization (col. 10, lines 66-67 and col. 11, lines 1-48, The service agent forms an SLA.); receiving a request from the client organization to the service level agreement manager (col. 10, lines 66-67 and col. 11, lines 1-48, The customer sends a message to the service agent, which is part of the authority.); with the service level agreement manager, determining if the request is within the scope of the service level agreement (col. 10, lines 66-67 and col. 11, lines 1-48, The service agent responds to the customer by checking SLA

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parameters.); if the request is within the scope of the service level agreement, providing the request to a performance measurement module (col. 12, lines 62-67 and col. 13, lines 1-16, The performance agent analyzes traffic associated with the resource.) and to the service organization (col. 11, lines 49-62); taking at least one performance measurement associated with performance response of the service organization to the request (col. 12, lines 62-67 and col. 13, lines 1-16, The performance agent analyzes traffic associated with the resource.); and checking the at least one performance measurement taken against the service level agreement (col. 10, lines 66-67 and col. 11, lines 1-48); however Somers does not explicitly teach obtaining a result from the service organization in response to the request and modifying an estimated capacity based of the service provider based on the measured performance.

Tunncliffe teaches obtaining a result from the service organization in response to the request (col. 6, lines 53-67 and col. 7, lines 1-3) and a system for measuring performance of a service implementation and modifying an estimated capacity of a service provider based on the measured performance (col. 6, lines 53-67 and col. 7, lines 1-3).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Somers regarding a service level agreement implementation with the teachings of Tunncliffe regarding modifying an estimated capacity based on the measured performance because changing an estimated capacity provides more flexibility for clients (Tunncliffe col. 1, lines 11-35).

9. As to claim 7, Tunncliffe teaches providing a result obtained to a client (col. 6, lines 53-67 and col. 7, lines 1-3).

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10. As to claim 8, Somers teaches a network, comprising: a plurality of service level managers (col. 10, lines 66-67 and col. 11, lines 1-48); at least one invocation infrastructure for communication between a plurality of client processes and the plurality of service level managers (col. 5, lines 48-53); and each service level manager of the service level managers in communication with a respective service implementation (col. 2, lines 62-27 and col. 3, lines 1-3) and configured to: receive a request from at least one of the client processes (col. 10, lines 50-65), determine whether to accept the request based on an estimated capacity of a service provider (col. 10, lines 50-65, The client either accepts or rejects a service offer.), accept the request when the estimated capacity is adequate (col. 10, lines 50-65); however Somers does not explicitly teach modifying an estimated capacity based of the service provider based on the measured performance.

Tunncliffe teaches a system for measuring performance of a service implementation and modifying an estimated capacity of a service provider based on the measured performance (col. 6, lines 53-67 and col. 7, lines 1-3).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Somers regarding a service level agreement implementation with the teachings of Tunncliffe regarding modifying an estimated capacity based on the measured performance because changing an estimated capacity provides more flexibility for clients (Tunncliffe col. 1, lines 11-35).

11. As to claim 9, the Somers- Tunncliffe combination makes claim 8 obvious. Somers teaches a network wherein the invocation infrastructure comprises a Common Object Request Broker Architecture (col. 5, lines 48-53).

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12. As to claim 10, the teachings of the Somers- Tunnicliffe combination make the teachings of claim 8 obvious; however the Somers- Tunnicliffe combination does not teach an infrastructure comprising Java Remote Method Invocation.

Official notice is taken that it was well known in the Computer Networking art at the time of the invention to use Java Remote Method Invocation at the time of the invention.

It would have been obvious to one of ordinary skill in the art of Computer Networking at the time of the invention to combine the teachings of the Somers- Tunnicliffe combination regarding service level agreements with Java RMI because Java RMI is a standard way to create distributed applications such as SLA's.

13. As to claim 12, Somers teaches a network, comprising: a client process (col. 10, lines 66-67 and col. 11, lines 1-48); a first plurality of service level managers (Figure 1 shows a plurality of authorities, which function as service level managers); at least one invocation infrastructure for communication between said first plurality of service level managers and said client process (col. 10, lines 66-67 and col. 11, lines 1-48, the system uses KQML messages.); each service level manager of said first plurality of service level managers in communication with a respective service implementation of a first plurality of service implementations (Figure 1 shows the authorities in contact with a plurality of service implementations (resources).); each said service implementation of said first plurality of service implementations in communication with at least one service level manager of a second plurality of service level managers (In Figure 1, the service implementations are in contact with other service level managers via their respective service level manager.); and each service level manager of said second plurality of service level manager in communication with a respective service implementation of a second plurality of

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service level implementations (In Figure 1, each service level manager is connected to a plurality of service implementations.), wherein at least one of the first plurality and second plurality of service level managers to configured to: receive a request from at least one of the client processes (col. 10, lines 50-65), determine whether to accept the request based on an estimated capacity of a service provider (col. 10, lines 50-65, The client either accepts or rejects a service offer.), accept the request when the estimated capacity is adequate (col. 10, lines 50-65); however Somers does not explicitly teach modifying an estimated capacity based of the service provider based on the measured performance.

Tunncliffe teaches a system for measuring performance of a service implementation and modifying an estimated capacity of a service provider based on the measured performance (col. 6, lines 53-67 and col. 7, lines 1-3).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Somers regarding a service level agreement implementation with the teachings of Tunncliffe regarding modifying an estimated capacity based on the measured performance because changing an estimated capacity provides more flexibility for clients (Tunncliffe col. 1, lines 11-35).

14. As to claim 13, it features the same limitations as claim 9 and is thus rejected on the same basis as claim 9.

15. As to claim 14, it features the same limitations as claim 10 and is thus rejected on the same basis as claim 10.

16. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,243,396 to Somers in view of U.S. Patent Number 6,272,110 to Tunncliffe et

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al. as applied to claims 8 and 12, respectively, above, and further in view of U.S. Patent Number 6,446,200 to Ball et al..

17. As to claim 11, the Somers-Tunncliffe combination makes claim 8 obvious; however the Somers- Tunncliffe combination does not teach the use of http in the invocation infrastructure.

Ball teaches a network wherein the invocation infrastructure comprises http (col. 8, lines 1-24).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Somers- Tunncliffe regarding the implementation of a service level agreement with the teachings of Ball regarding the use of http in an invocation infrastructure because the use of http reflects the clients interactions with a service system (Ball, col. 8, lines 1-24).

18. As to claim 15, it features the same limitation as claim 11 and is thus rejected on the same basis as claim 11.

19. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,243,396 to Somers in view of U.S. Patent Number 6,272,110 to Tunncliffe et al. as applied to claim 8 above, and further in view of U.S. Patent Number 6,117,188 to Aronberg et al. and U.S. Patent Number 6,442,608 to Knight et al..

20. As to claim 16, the teachings of the Somers- Tunncliffe combination make claim 8 obvious; however they do not teach the use of tokens for service provisioning.

Knight teaches a network wherein each of the plurality of client processes is assigned a number of sessions and when determining whether to accept a request from a first client process to a first service level manager, the first service level manager is further configured to determine

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whether to accept the request based on the number of sessions associated with the first client process (col. 23, lines 33-67, col. 24, lines 1-67, and col. 25, lines 1-48); however Knight does not explicitly teach the use of tokens associated with a client process.

Aronberg teaches the use of a fixed number of tokens used to regulate network access (col. 4, lines 56-67 and col. 5, lines 1-30).

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Knight regarding keeping track of sessions associated with client processes with the teachings of Aronberg regarding the use of tokens because tokens provide a functional alternative to the counter as implemented by Knight.

It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of the Somers- Tunnicliffe combination regarding the implementation of service level agreement with the teachings of the Knight-Aronberg combination regarding using tokens to limit access to a particular client process because limiting access of specific clients would ensure a more consistent level of service for all clients.

21. As to claim 17, Knight teaches a network wherein when a request from a client process is accepted, a first service level manager is configured to deduct a count associated with the first client process (col. 23, lines 33-67, col. 24, lines 1-67, and col. 25, lines 1-48). For reasons discussed in the rejection of claim 16 it would have been obvious to use tokens instead of a count.

Response to Arguments

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22. Applicant's arguments filed 6/18/2003 have been fully considered but they are not persuasive. The applicant argues the following points: (a) Schuster does not disclose modifying an estimated capacity of the service provider based on the measured performance; (b) Measuring the estimated capacity of a service provider is not equivalent to modifying an estimated capacity of a service provider based on the measured performance; (c) Knight and Aronberg are clearly directed to different environments and it would not have been obvious to combine features from these disparate environments without the benefit of the applicant's disclosure; (d) There is no motivation provided for combining the Somers, Schuster, Knight and Aronberg references; (e) Aronberg does not disclose determining whether to accept a request based on the number of tokens associated with a client process; (f) Assigning session to an entity such as a company, is not equivalent to assigning sessions to each of a plurality of client processes; and (g) Knight does not disclose deducting a number of sessions from the client process if the request is accepted.

23. As to points (a) and (b), these arguments are considered moot in view of new grounds of rejection.

24. As to point (c), Knight and Aronberg are both directed towards systems for limiting the access to a resource to a particular entity. In such a context it would be obvious to combine there features for reasons stated in the rejection of claim 16.

25. As to point (d), Motivation for combining the Somers, Tunnicliffe, Knight, and Aronberg references is provided in the rejection of claim 16.

26. As to point (e), col. 5, lines 7-13 of Aronberg describe allotting a number of tokens to users that access the network some form of client process (in Aronberg, col. 2, lines 40-61, the users access a server thus using some sort of client process.).

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27. As to point (f), The entities discussed in Knight access the network via client processes (see Figure 1a of Knight).

28. As to point (g), deducting the number of sessions from a particular entity also deducts the number of sessions for the associated client process used to access the network (see Figure 1a of Knight.).

Conclusion

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas B Blair whose telephone number is 703-305-5267. The examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Powell can be reached on 703-305-9703. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.

Douglas Blair
August 28, 2003

DBB

MARC D. THOMPSON
MARC THOMPSON
PRIMARY EXAMINER